



[BILLING CODE 4140-01-P]

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Request for Information on input on opportunities of engagement of external stakeholders with the “Illuminating the Druggable Genome” (IDG) Program

SUMMARY: NIH seeks input from the biomedical research community, biotechnology and pharmaceutical companies and other members of the public on interest and opportunities of engagement with the Illuminating the Druggable Genome (IDG) Program. The purpose of this Request for Information (RFI) is to identify and obtain comments on strategies for sharing potential data, tools, and other resources of common interest generated by the IDG Program and by external stakeholders to maximize the impact of the IDG Program.

DATES: The IDG Program Request for Information is open for public comment for a period of 30 days. Comments must be received by [FEDERAL REGISTER INSERT THE DATE 30 DAYS FOLLOWING THE DATE OF PUBLICATION] to ensure consideration. After the public comment period has closed, the comments received by the IDG Program will be considered in a timely manner by the National Center for Advancing Translational Sciences (NCATS) and the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK).

ADDRESSES: Submissions may be sent electronically to DK-IDG-Phase2-RFI@mail.nih.gov or by mail to Dr. Karlie Sharma, National Center for Advancing Translational Sciences, National Institutes of Health, 6701 Democracy Blvd. Suite 900, Bethesda, MD 20892.

FOR FURTHER INFORMATION CONTACT: Questions about this request for information should be directed to Dr. Karlie Sharma, National Center for Advancing Translational Sciences, National Institutes of Health, 6701 Democracy Blvd. Suite 900, Bethesda, MD 20892, DK-IDG-Phase2-RFI@mail.nih.gov, 301-451-4965.

SUPPLEMENTARY INFORMATION: Out of the nearly 30,000 genes in the human genome, approximately 3,000 genes are estimated to be part of the druggable genome -- the subset of genes expressing proteins with the ability to bind drug-like molecules. Yet, only about ten percent of druggable proteins are targeted by Food and Drug Administration (FDA)-approved drugs. Many proteins that comprise the druggable genome are members of the G-protein coupled receptor (GPCR), ion channel, and kinase families. A significant number of proteins within these classes are understudied and are the focus of the data and resource generation initiative of the IDG Program.

1. Goals and Requirements

The IDG Program was originally funded as a three-year pilot program in 2014 with two overarching goals: (1) integrate information about understudied druggable proteins from disparate sources into a single informatics site and (2) foster technology development to enable the determination of function and therapeutic potential of

understudied druggable proteins. Having successfully achieved these goals, the IDG Program is currently transitioning to a new implementation phase intended to:

- Expand the informatics tools developed in the pilot phase to include additional data and allow users to access, analyze, and visualize a wide range of information on sets of proteins.
- Facilitate the elucidation of the function of understudied proteins from the three key druggable protein families (GPCR, ion channels, and kinases) by generating new reagents and new data.
- Disseminate the IDG-generated resources and data to the greater scientific community.

2. Information Requested

NIH is seeking input from national and international experts and interested members of the public that includes, but is not limited to, the following areas:

- Resources that an outside organization (biotechnology or pharmaceutical company; non-profit organization; academic institution and national/international consortia) might be willing to share with the IDG Program and may:
 - strategize development of chemical probes against proteins drawn from the IDG focused list
 - develop assays and platforms that can help to answer questions about understudied protein function
 - identify reagents that may be useful in annotation efforts
 - provide data or knowledge on any understudied protein

- Potential resources of the IDG Program that are of interest to an outside organization of the broader biomedical research community including:
 - sharable databases of relevant subsets of data on understudied proteins
 - data analysis and query tools
 - links between protein target and disease pathologies
 - new methods of analysis to accelerate collection of data

This RFI is for planning purposes only and should not be construed as a solicitation for applications or proposals, or as an obligation in any way on the part of the United States Federal government. The Federal government will not pay for the preparation of any information submitted or for the government's use. Additionally, the government cannot guarantee the confidentiality of the information provided.

Dated: April 12, 2017

Christopher P. Austin,

Director, NCATS

Griffin P. Rodgers,

Director, NIDDK

Illuminating the Druggable Genome Program

National Center for Advancing Translational Sciences, National Institute of Diabetes and

Digestive and Kidney Diseases

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